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AIRPLANE RESEEDING

(From selected list compiled by Elinor E. Dunnigan,
U. S. Dept. of Agriculture Library)

April 1, 1947

American farmers and ranchers will use airplane for many specialized agricultural operations and to transport perishables to distant markets.

Du Pont de Nemours, E. I. & Co., Agr. News Letter 14: 23-26. Mar./Apr. 1946. 6 D92

Includes brief description of seeding of stripped-over coal land.

Ashley, T. Planting by airplane. Southern Flight 23(3): 30-31, 72. Mar. 1945. Libr. Cong.

Description of Adams pellets and of Adams centrifugal planter. Planter shoots pellets downward in a row, or broadside. Machine for manufacturing pellets pictured, and company named. Size of grass-seed pellet is 1,920 to a pound. An acre of range is 22.69 pounds of seed, at 241 acres per minute.

Special pellet with metal projectile dropped into forest mulch, such as leaves.

Possibilities for plane planting almost unlimited, e. g. in Russia, by using military aircraft for revegetation.

Once growth is started it will lead to automatic reseeding by natural means.

Adams suggests aerial planting every ten years. Idea of pellets occurred to him in 1924.

Dunn, H. H. Farmer takes to the air. Travel 58(5): 40-43. Mar. 1932. Libr. Cong.

Includes following information on seeding: Plane planted nearly 2,000 acres to wheat in 3 hours; Hawaii replanting native forests from the air includes mention of chief tree seeds planted, "from altitude of 2,000 feet; Planes with hoppers developed by USDA and corporations which maintain planes for this commercial use; Planting rye, vetch, clover, or mixture, on cut-over timber lands - seed spread at 200 to 500 ft. altitude - cost and method.

Farming takes to the air. Pop. Mechanics Mag. 74(3): 371-373, 120A-121A. Sept. 1940. 291.8 P81

Crop dusting and planting done by commercial flyers. Best time is early morning and evening, because of less wind. Includes the technique of flying and a description of the hopper for seed.

Gleason, C. H. Directions for sowing mustard for erosion control in burned areas of Southern California. U. S. Forest Service, California Forest and Range Experiment Station. Forest Research Notes, No. 37, 29 p., processed. Jan. 15, 1944, 1.9 F7626R

"Sowing by plane", p. 8-9, includes equipment of plane.

Appendix E, p. 19-22 - "Specifications and airplane service."

Appendix F, p. 23 - "Method of calibrating seed hopper."

(Over)

Haystead, L. 20,000 acres per hour. Fortune 31(6): 166, 168. June 1945.

110 F772

Sowing seed over large areas by use of seed pellets.

Includes equipment, and costs.

Includes mention of USDA-USDI bill to Congress asking for \$2,500,000 for renewing forage.

Judd, C. S. Airplane seed sowing. J. Forestry 24: 931-932. Dec. 1926.

99.8 F768

Tree seeds of many species sown broadcast over the Panaewa Forest Reserve on island of Hawaii, to reestablish a forest cover on a burned area. 700 pounds of seed were dropped from an altitude of 1,500 ft, with the plane flying at about 110 mph.

Lassetter, W. C. Airplanes for farm work. Prog. Farmer, Miss.-Ark.-La. Ed. 61(6): 12-13, 71. June 1946. 6 So81

Work by commercial pilots. Method, costs, arrangement and size of fields. Includes planting of lespedeza, other grasses, rice, and cover crops in cotton.

Mahoney, M. Sky planting in the desert. Travel 87(5): 4-8, 30. Sept. 1946. Libr. Cong.

Seed pellets planted on Papago Indian Reservation, Sells, Arizona. The pellets fall approximately 1 per sq. ft. and each flight covered an acre per second. The altitude was 500 ft. Pellets are adaptable for row crop and reforestation seeding.

Mark, F. A., and Roaf, J. R. Range seeding by airplane. Soil Conserv. 6: 270, 272. Apr. 1941. 1.6 So3S

Squaw Creek planting, Idaho. 2,500 acres planted with 5,875 pounds seed Agropyron cristatum. Distribution of seed checked by greased cards. Plane fly at alt. 300 to 500 ft. Best time for sowing - early morning and 4 P. until dusk.

Pickford, G. D. and Jackman, E. R. Reseeding Eastern Oregon Summer Ranges. Oregon State Agri. Expt. Sta. Cir. No. 159, p. 41 January 1944.

Coos County, Oregon airplane seeding. 12,000 acres seeded in 1936.

cost 21 cents per acre for use of plane. Seeded in 150 ft. strips from 500 ft. height at rate of 8 lbs. seed per acre. Costs comparable to hand broadcasting.

Plummer, A. P., and Stewart, G. Seeding grass on deteriorated aspen range U. S. Forest Service. Intermountain Forest and Range Experiment Station. Ogden, Utah. Res. Paper No. 11, 6 p. processed. Oct. 1944. 1.9622 I2R3

Mentions briefly that airplane seeding is possible.

Prichard, A. M. Air sowing; application and limitations. New Zeal. J. Agr. 70: 117-120. Feb. 15, 1945. 23 N48J

Prepared from a technical report on experiments conducted by the New Zealand Public Works Department.

Lupin seed sown on sand dunes from altitude of 100 to 150 ft. Includes method, results, cost, and flight technique.

Stanton, C. V. Sceding of waste lands by airplanc. Aviation 26: 243-245.
Jan. 26, 1929. Libr. Cong.

Experiment in southern Oregon where "logged-over" lands are being seeded and converted into stock ranges. Development of early hopper.

Flying skill required, because of turns, low altitudes, and reloading.

Seeding most effective if it follows immediately after the fire that burns through the slashing.

Comparison of costs and labor needed, with hand and machine sowing.

U. S. Forest Service has been making careful check of results, such as: the stand of grass is heavier than usually obtained by hand sowing, although less seed is used and seed distribution is far more uniform. It is not known whether plane can supplant methods now used in sowing great grain fields.

Teutsch, W. L. Oregon tries sky planting. Ext. Serv. Rev. 8: 179-180.

Dec. 1937. 1 Ex892Ex

12,000 acres of burned-over ground seeded. Gives technique of sowing and a description of the grasses.

Teutsch, W. L. Seeding range lands by airplane. Natl. Wool Grower 18(3) : 29-30. Mar. 1928. 45.8 N21N

1,000 acres of burned-over, logged-off land seeded in Coos County, Oregon, Flown twice; orchard grass and rye grass broadcast first time and alsike and white clover second time. 500 ft. alt.; 4,500 pounds of seed. Total cost \$420; was \$1080 less than estimate for hand broadcasting. Resulted in good distribution and excellent stand.

Winters, S. R. Plane planters. Flying 30 (3): 48-49, 112. Mar. 1, 1942.
Libr. Cong.

At Squaw Creek Hills, Idaho, planes were used by the Federal Government to sow grass seed in mountainous areas and other inaccessible areas.

Method: Flying 80 mph, alt. 300 ft., seeded 100-ft. wide strips. Cross-seeded at right-angles. Planting grass seed from planes over forest burns has been accomplished in the West by U. S. Forest Service.

Description of plane and hopper for seeds, used in Oregon operations.

August and September are best months for air seeding. U. S. Forest Service planting of mustard seed for erosion control in California, by airplane.

